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ABSTRACT

Results are reported from a study designed to evaluate the preschool experiences of pupils in the Greenwood, Mississippi, public schools. The relationship of these experiences to pupils' first grade basic skills achievement was also examined. In order to determine what constituted the Greenwood area's preschool program, each preschool center within the city was visited and evaluated in terms of six areas of interest: language development, physical development, social-emotional development, cognition, problem-solving, and scientific, mathematical and creative development. In addition to visiting each preschool setting in the city, the parents of each first grade student were interviewed by their child's first grade teacher. The interview was basically structured to identify the child's preschool experiences and the type of experiences a child had had at home. These experiences were labeled Reading, Verbal, Physical, Social, Travel, Music, and Art. Background data in family structure were also collected and were used to examine the influence of the home environment on the child's achievement. Achievement data on the first grade students were also collected. This data included California Achievement Test Scores for reading and mathematics, as well as the grades the students received for reading, mathematics, spelling, and handwriting. Results from visiting the preschool centers are presented and the results from the analysis of 10 background and first grade variables collected for each child are discussed. These variables are race, sex, reading, math, spelling and handwriting grades, type of school, place in family, and preschool attendence. Finally, the results from the analysis of home experience variables are considered. Four conclusions and recommendations derived from the study are outlined, and a copy of the parent interview form along with a copy of the Preschool Activity Form, used to collect data on the preschool programs, are appended. (Author/MP)

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Evaluation of Preschool Experiences and their Relationship to First Grade Basic Skills Achievement in the Greenwood Public Schools

by

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INTRODUCTION

One of the most controversial topics in Mississippi concerns whether the public schools should offer free public kindergartens to all five-year-old children. While a bill to create public kindergartens failed in the past session of the legislature, the Greenwood Public Schools felt a need to learn more about the existing preschool experiences available in the city. Hopefully, this information can aid school officials as they make plans for providing first grade instruction to the students who arrive at school with the different preschool experiences.

DATA SOURCES

The school officials felt that it would be necessary first to visit each preschool in the city to determine what actually constituted its preschool program. Dr. Kathy Grace was secured by the Greenwood Public Schools to make personal reviews of all the preschool programs using an observation checklist jointly developed by PREPS and Dr. Grace. The checklist is contained in Table A in the appendix.

The "Pre-School Activity Form" addressed the following six areas of interest: Language Development; Physical Development; Social-Emotional Development; Cognition, Problem-Solving, and Scientific Development; Mathematical Development; and Creative Development. In addition, the checklist covered questions on facilities, teacher-pupil ratio, and program philosophy.

In addition to visiting each preschool setting in the city, the parents of each first grade student were interviewed by their child's first grade teacher. The form used in this interview is also contained in the appendix. The interview was basically structured not only to identify the child's preschool experiences, but also to identify the type of experiences a child had had at home in the areas of Reading, Verbal, Physical, Social, Travel, Music, and Art. Background data on family structure were also collected. These data were secured since research tends to suggest that the home influence on a child's achievement is tremendous.

Achievement data on the first grade students were also collected for this study. The achievement data included CAT-77 scores for reading and mathematics, as well as the grades the students received for reading, mathematics, spelling, and handwriting.

STATISTICAL METHODS

Two major statistical methods were used to analyze the data in this report to provide a more detailed analysis than simple calculations of means and counts to describe the data. A multiple regression procedure was used to determine the effect of home experiences on total reading and mathematics scores. The procedure used was a step-wise procedure in which pretest scores in the related area of interest was used on the first step to serve as a covariant. Therefore, any other variables which entered the equation after the first step would account for unique variance not explained by the knowledge the student had when he/she entered school.

The second statistical methodology which was used was nonstandard analysis of covariance. In this procedure, all posttest scores in reading and math on the CAT-77 were first adjusted for the pretest scores in that area. Once this procedure was accomplished, it was possible to determine if there were a significant difference in the achievement patterns for different groups, not due simply to previous knowledge.

The results of this study will be presented in the following order. First, the results from visiting the preschool centers will be presented. Second, the results from the analysis of background variables on achievement will be discussed. Finally, the results from the analysis of home experiences variables will be considered.

RESULTS

PRESCHOOL REVIEW

The initial activity in this project was to visit each of the preschool centers in the city. Unfortunately, one center was unwilling to participate in the project, but nine of ten preschool programs were visited. The responses discussed below are only for the five-year-old students in the programs.

Table 1 provides the pretest and posttest results for the preschool and non-preschool students. Any student who had been involved in an organized preschool program, including the area head start center, was counted as a student who had preschool experience. Of the 226 students who fell in the preschool category, 132 students had been in the head start center. Even with the inclusion of head start students (who are by definition economically and educationally deprived), the students

Table 1

Means and Standard Deviations for
Reading and Mathematics by
Preschool Experience Group

		Mathematics			Reading		
	N	Pre $\overline{X}$	Post $\overline{X}$	Gain $\overline{X}$	Pre $\overline{X}$	Post $\overline{X}$	Gain $\overline{X}$
Preschool	226	270.69 (26.58)*	320.15 (28.14)	49.46	208.64 (53.84)	305.38 (42.19)	96.74
No Preschool	53	262.03 (23.72)	314.63 (26.66)	52.60	199.88 (62.63)	298.43 (47.37)	98.55
Total	279	269.23 (25.41)	319.57 (27.88)	50.34	206.72 (55.93)	303.78 (43.10)	97.06

*Standard deviations are given in parentheses.

with preschool experiences came to school with higher scores and finished the year with higher scores. There were no noticeable differences in the changes from pretest to posttest averages in both mathematics and reading for either subgroup.

An on-site evaluation was made for nine of the ten preschool centers in the area using the form found in the appendix of this report. The data presented in the appendix represent the sum of all the observations.

In the area of Language Development, Dr. Grace found three areas for which all preschools provided in their programs, as seen in Table A in the appendix. The most disagreement occurred for item b, "oral language recorded through the use of experience charts and stories." There were five preschools which provided this opportunity and four which did not. The head start center did not provide four of the seven areas listed under Language Development and was the only preschool which failed to provide an opportunity in more than one area listed under Language Development. The most disturbing omissions in light of research were the failure to provide an opportunity for development of oral language expression and listening skills and the failure to read to the children daily. These two factors have been demonstrated in the literature to be critical factors in future language development. While preschools varied from 15 to 80 minutes a day in the area of Language Development, the average program spent 31 minutes a day in this area. All but one preschool provided daily activities in Language Development.

The second area considered was for Physical Development. There were eight of the twelve categories on which activities all the preschools agreed. The most variance occurred for item e, "opportunities to experience

many dimensions of size and space." There were three of the nine preschools which did not provide this opportunity. There were two of the nine centers which did not involve themselves in experiencing different foods and discussing eating habits. No one preschool appeared to have a large number of deficiencies, according to the checklist used by Dr. Grace. The children tended to spend 48 minutes each day in the area of Physical Development with the actual times ranging from 20 to 80 minutes per day.

The third area considered in this study was Social-Emotional Development. There were seven of the ten areas on which all the preschool centers agreed. There were two preschool centers which did not promote independence, item g. There were two preschool centers which disagreed with at least two other items. Seven preschool centers agreed with every item listed under this area.

The fourth area considered in this study was Cognition, Problem-Solving, and Scientific Development. Of the 14 items listed under this section, all the preschool centers agreed to only four. There were two areas where great variance existed in the programs. Only four of the nine preschool centers provided students the "opportunity for the child to observe a variety of natural phenomena and to take care for and observe plants and animals." Only five of the nine preschool centers provided students with discovery-type activities. The head start center failed to provide opportunities in seven of the fourteen items listed under the area, while another preschool center did not provide opportunities in five of the items. The average preschool center spent 41 minutes per day on this area with the actual time ranging from 10 minutes to 60 minutes per day.

The fifth area considered in this study was Mathematics Development. For this area, all nine preschool centers agreed on each item listed. The average preschool spent 31 minutes per day on this area, while actual times varied from 15 to 60 minutes per day.

The sixth and final area considered in this study was Creative Development. The preschools agreed on seven of the eleven items listed in the area. The most disagreement was for item d, "appreciation of the artistic and the beautiful through the use of classical works of art." There were only three of the nine preschool centers which provided an opportunity for "dictation of experience stories and recording of verbal experiences," item i. Two of the preschool centers had three of the eleven items under this area for which they did not provide an opportunity. The average preschool center spent 40 minutes a day in this area with the actual times ranging from 6 to 75 minutes per day.

The study also covered the presence of ten interest centers which are considered in the literature to be valuable for preschool students. Eight of the ten centers were present in each preschool program. Only six of the nine preschool centers had a Science/Social Science area. Only two of the nine preschool centers had a private place for each student.

All nine preschool centers were judged to have adequate facilities, but only six of the nine preschool centers had teachers who were certified in early childhood education. The average teacher-student ratio was 14.3 to 1 with the actual ratio ranging from 19 to 1 to 11 to 1. When aides were considered in the ratio, the average adult/student ratio was 12.4 to 1. Dr. Grace judged that six of the nine preschools identified with a structured program philosophy of "academically oriented." She also judged

five of the preschools to agree with the "Total Child Development Theory." Two preschool centers identified with both philosophies. Only one preschool was judged to be against the "Total Child Development Theory."

BACKGROUND VARIABLES

There were ten background and first grade variables collected on each child in the study: race, sex, reading grade, math grade, spelling grade, handwriting grade, school, place in family, and preschool attended. For each of these factors, means and standard deviations were calculated on the pre and post reading and math scores. The results of the non-standard analysis of covariance are given in Table 2.

Table 2 shows that a significant difference in the mean achievement pattern was identified for both reading and math. Table 3 gives the means and standard deviations for both race and sex. This table shows that the white students had higher mean scores for every area. Figures 1 and 2 provide graphical displays of these achievement patterns. These figures show that the white students had the superior achievement pattern, especially for students who had higher pretest scores.

Table 3 also gives the mean scores in reading and mathematics by sex. The females had the higher mean scores for each area. Table 2 reveals that significant differences in the mean achievement patterns were identified for both reading and mathematics. Figures 3 and 4 provide graphical displays of these patterns. In both cases, the females have the superior achievement pattern. For mathematics, the lower the pretest score, the more the females outscored the males.

Table 2

F Ratios for Slope and
Magnitude by Background Factor

	Reading		Math	
Variable	Slope	Mean	Slope	Mean
Race	3.34	10.39*	.39	13.68*
Sex	.11	9.85*	1.43	3.22*
Reading Grade	1.87	11.50*	.73	5.80*
Math Grade	2.14	9.74*	.97	7.17*
Spelling Grade	.03	.05	.02	.01
Handwriting Grade	.96	4.76*	1.03	3.00
School	4.02*	4.40*	.41	3.17*
Place in Family	.81	.54	2.17	.89
Family Structure	.81	.51	.31	.45
Preschool	4.49*	2.20	.75	3.29*

*Significant at $\alpha = .05$.

Table 3

Means and Standard Deviations for Reading and Math for:

RACE

	Math Pre			Math Post			Reading Pre			Reading Post		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
Black	178	266.14	25.56	167	313.77	28.26	178	195.34	52.88	167	293.17	38.68
White	98	275.22	24.42	97	329.63	24.73	98	227.35	56.47	97	322.30	44.01
Other	3	257.33	12.66	3	316.66	7.50	3	208.00	17.43	3	295.66	61.23
Total	279	269.23	25.41	267	319.57	27.88	279	206.72	55.93	267	303.78	43.10

SEX

	Math Pre			Math Post			Reading Pre			Reading Post		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
Female	125	270.32	22.88	122	322.76	25.46	125	210.21	51.06	122	312.21	39.29
Male	154	268.35	27.33	145	316.88	29.60	154	203.89	59.61	145	296.69	44.98
Total	279	269.23	25.41	267	319.57	27.88	279	206.72	55.93	267	303.78	43.10

Figure 1

Achievement Patterns in Reading by Race

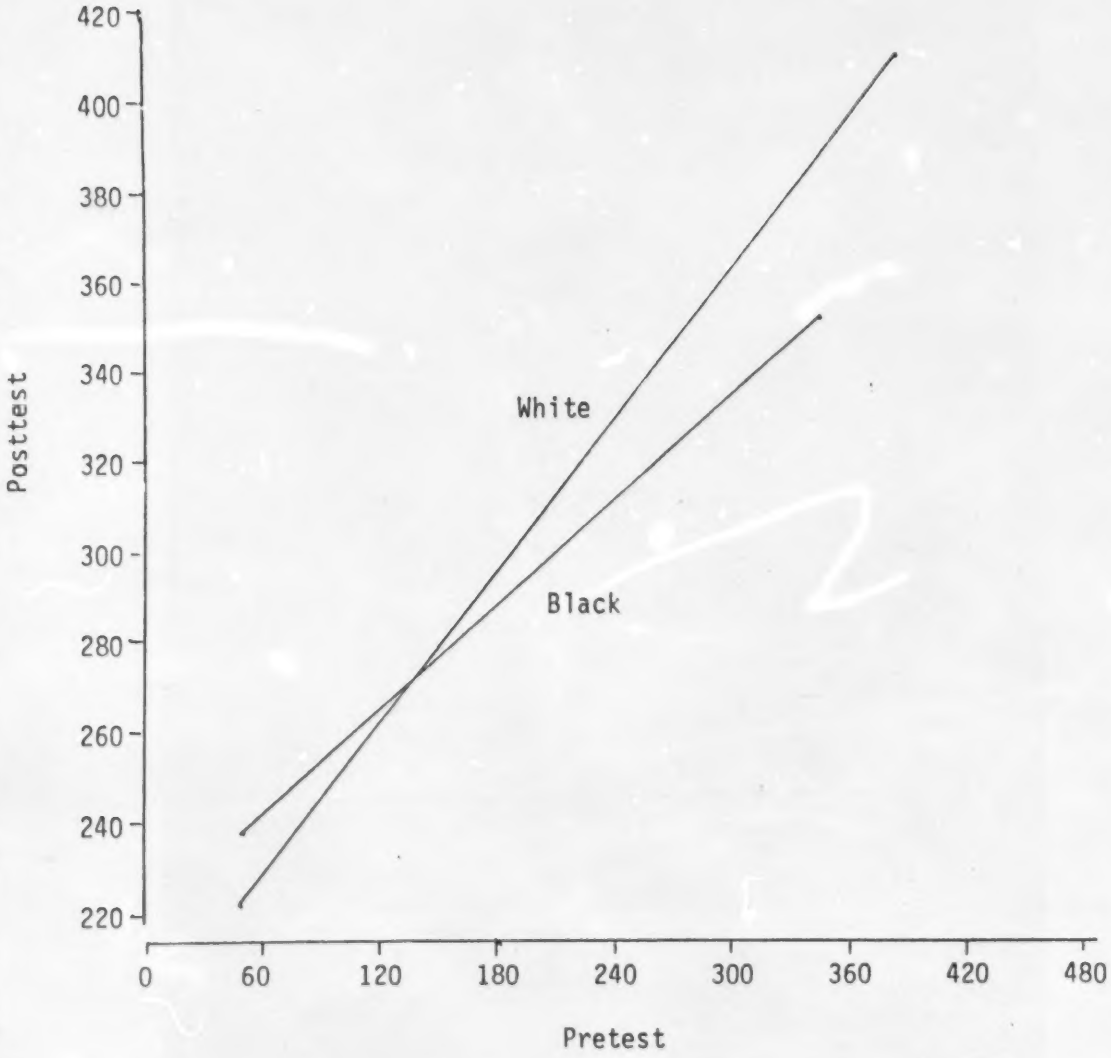


Figure 2

Achievement Patterns in Math by Race

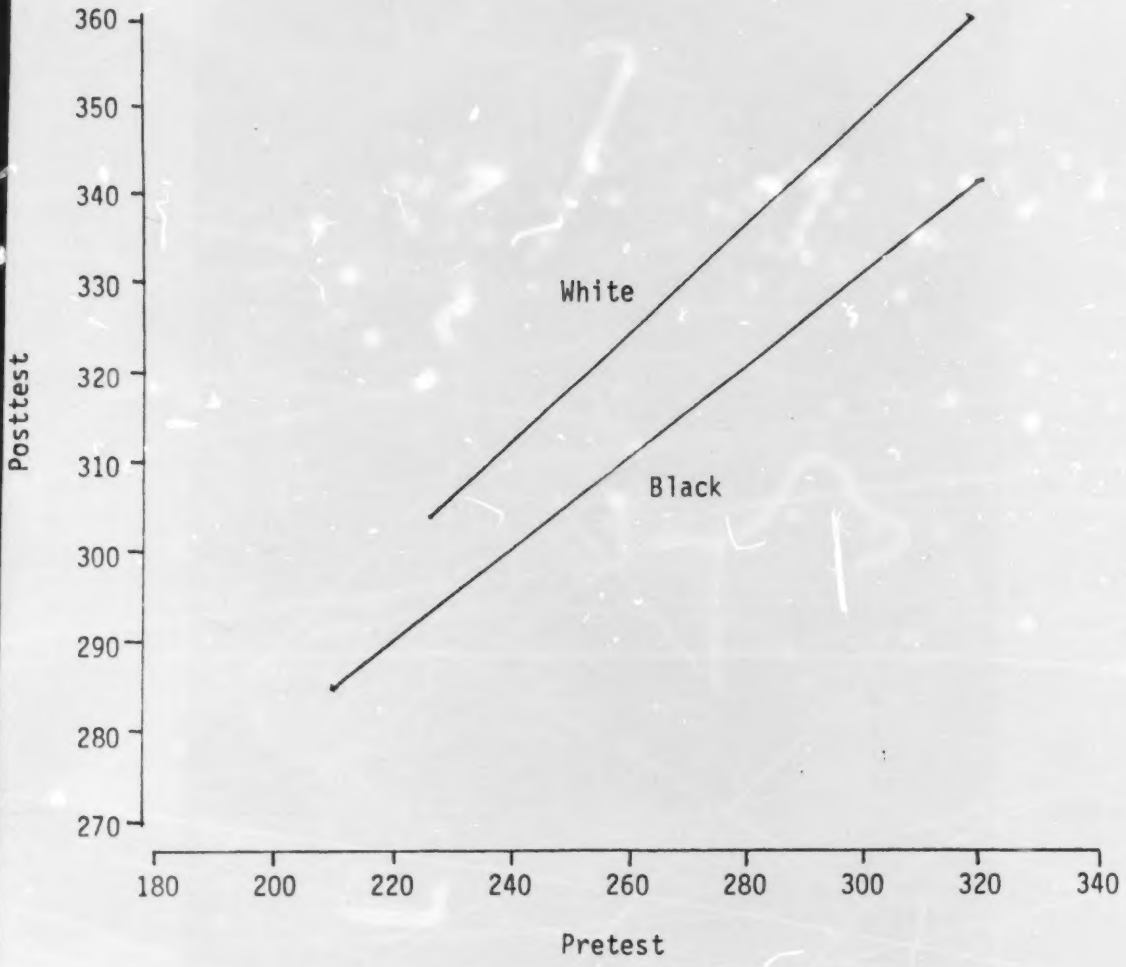


Figure 3

Achievement Patterns in Reading by Sex

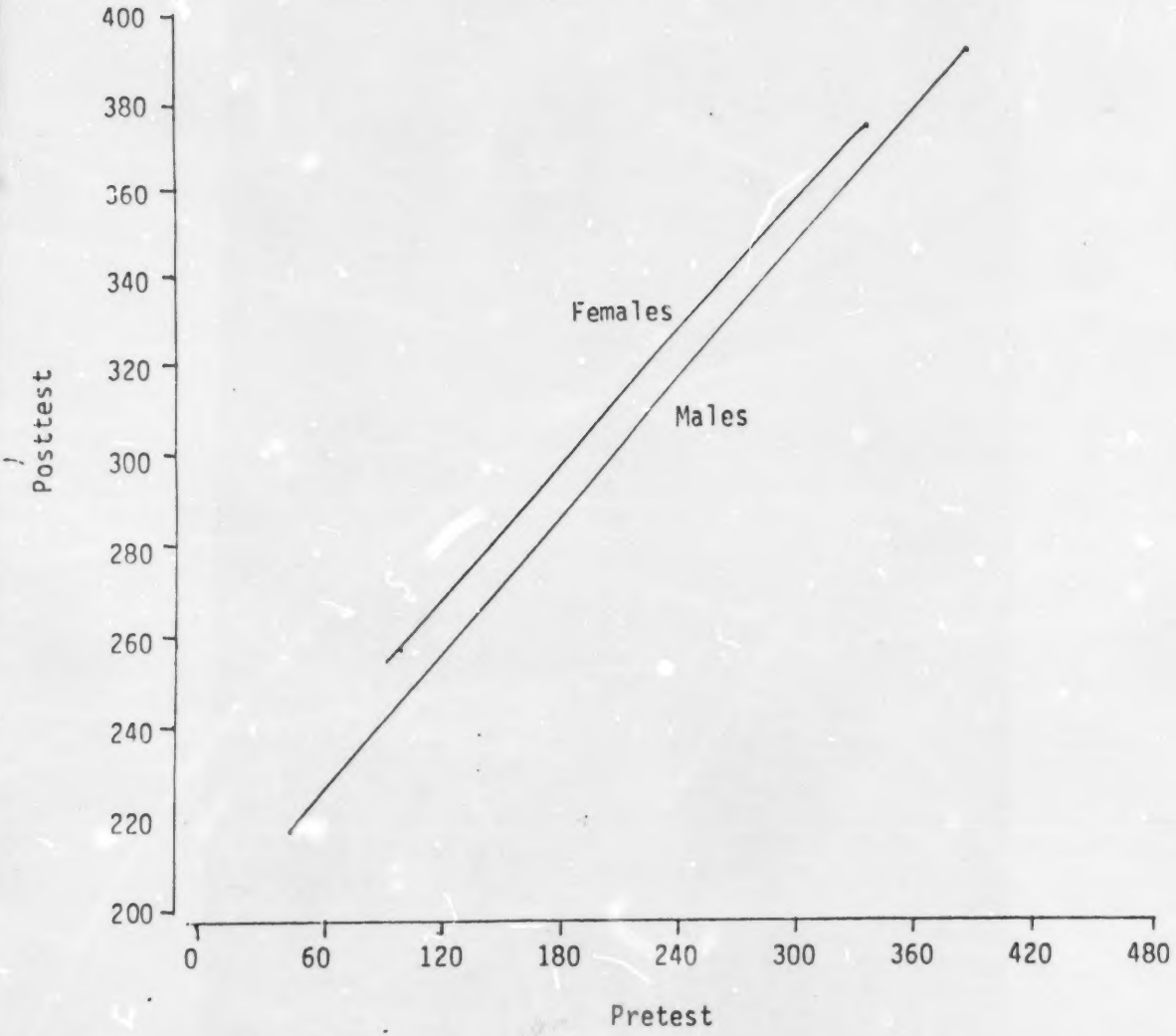
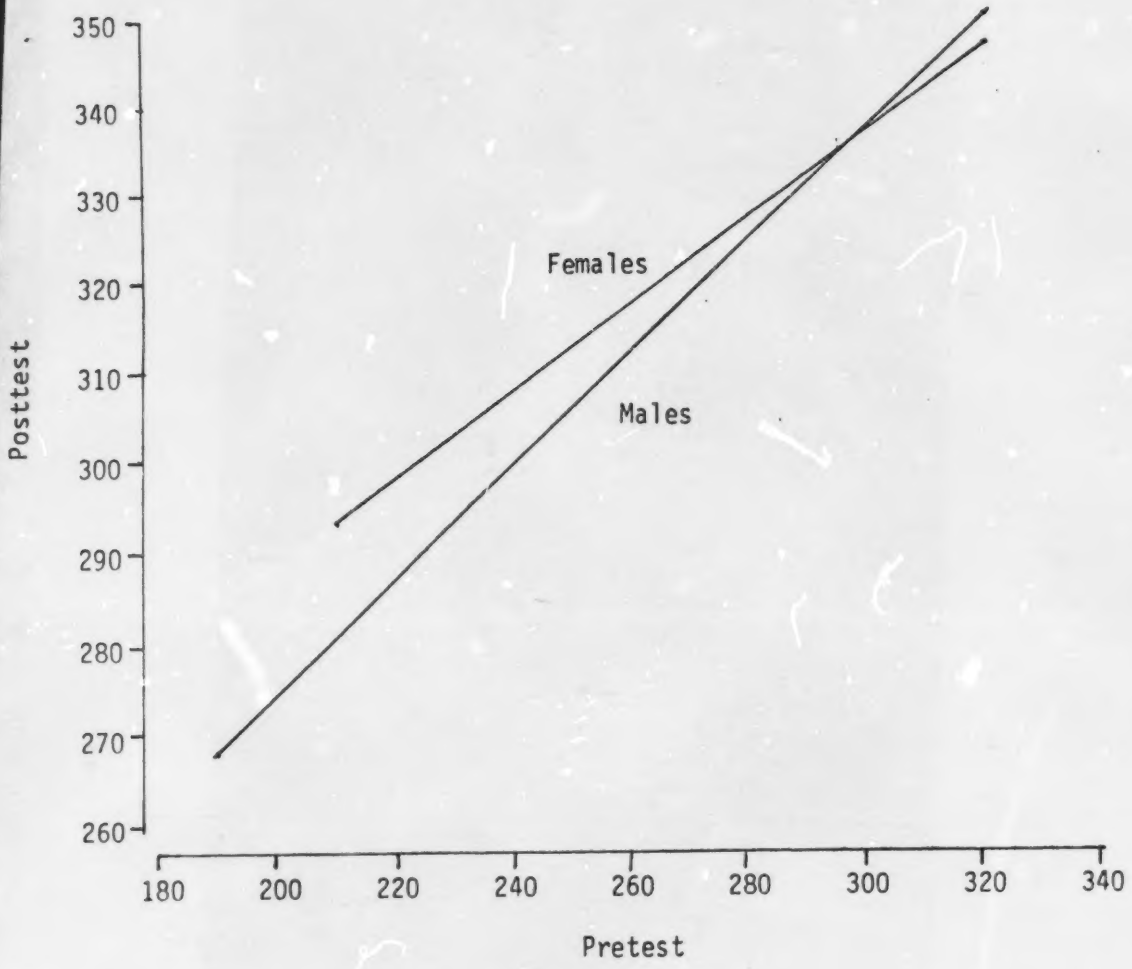


Figure 4

Achievement Patterns in Mathematics by Sex



The next area covered in the analysis was the grade the teachers gave the students in reading. The mean scores for both reading and mathematics achievement tests are contained in Table 4. The results show that A students scored higher than C students in both reading and math achievement. There appears to be no real distinction between a grade of C and D in either achievement area, but there is a sharp drop for those students getting an F. Sixteen percent of the first grade students received an F in reading last year.

In Table 2, significant differences in the achievement patterns by grade received in reading were identified for both reading and mathematics achievement. Figures 5 and 6 provide graphical displays of the resulting patterns. In both graphs, the A and B grades form distinct, but strong, patterns. The C and D grades are mixed, with no clear differentiation between these patterns. The students receiving an F form a uniquely lower pattern. From these data, there would appear to be three groups of students as opposed to five groups as indicated by the grading system.

Table 2 reveals that significant differences in achievement patterns by grades received in math were identified for both reading and math achievement. Table 6 provides the means and standard deviations for the reading and math achievement scores by grades given in math. There appears to be a logical progression of the achievement scores as related to grades in math. Only 8% of the students received an F in math.

Figures 7 and 8 provide graphical displays of the achievement patterns by the grade given in math. The A and B patterns are distinct and unique. For the math achievement patterns, the C and D grades are confused, with the F pattern being distinctively low.

Table 4

Means and Standard Deviations for Reading and Math Achievement by Reading Grades

	Math Pre			Math Post			Reading Pre			Reading Post		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
A	41	292.48	23.55	41	343.21	24.15	41	259.82	47.63	41	346.34	28.36
B	104	275.92	20.48	103	328.53	22.37	104	217.09	42.18	103	318.47	33.30
C	70	263.88	23.79	69	308.81	25.47	70	201.91	48.27	69	287.65	37.33
D	17	261.00	19.22	16	309.93	20.94	17	199.94	57.45	16	291.25	23.80
F	46	245.19	16.19	37	293.08	20.36	46	146.67	43.55	37	251.72	27.92
Total	279	269.23	25.41	267	319.57	27.88	279	206.72	55.93	267	303.78	43.10

Figure 5

Achievement Patterns in Reading by Reading Grade

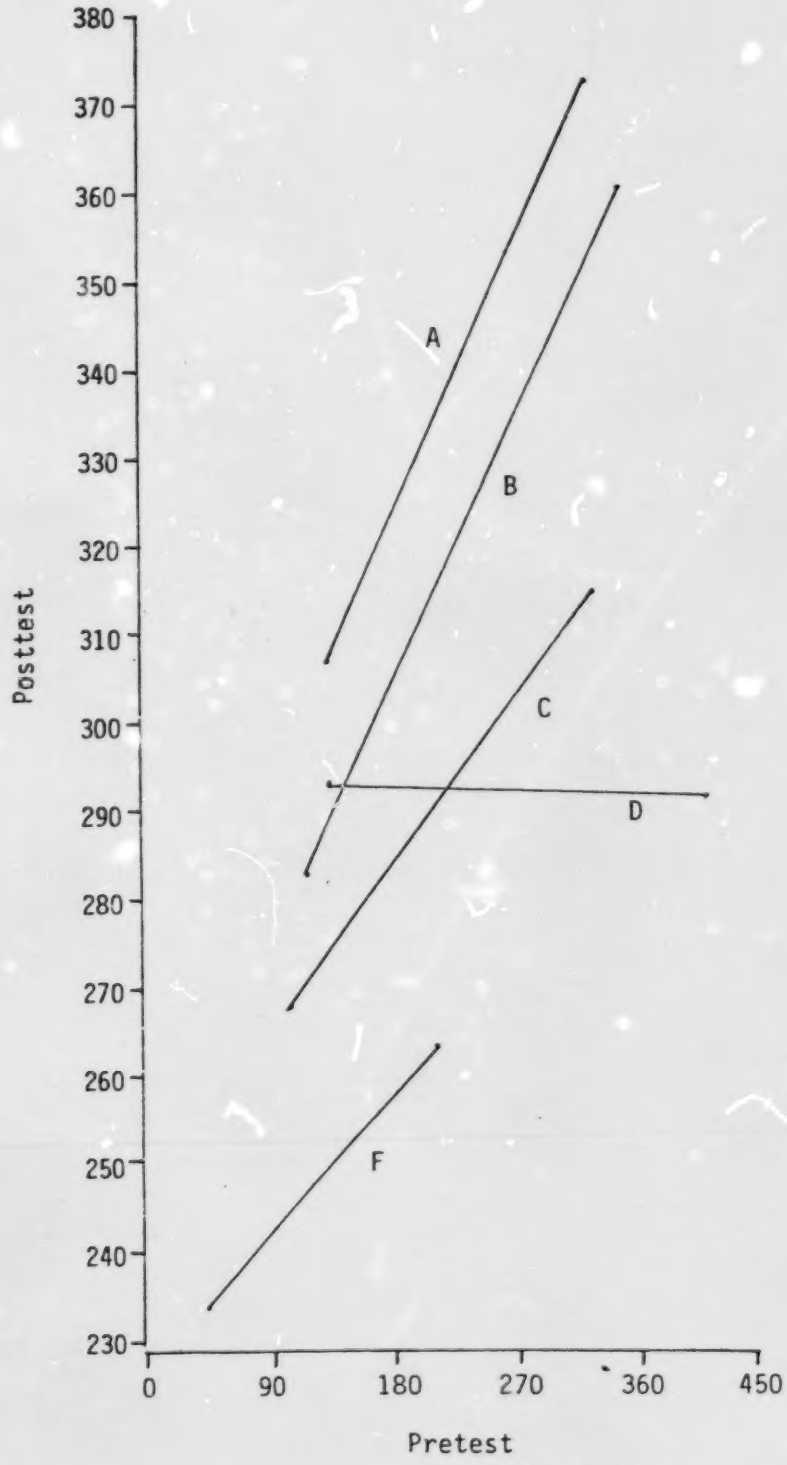


Figure 6

Achievement Patterns in Math by Reading Grade

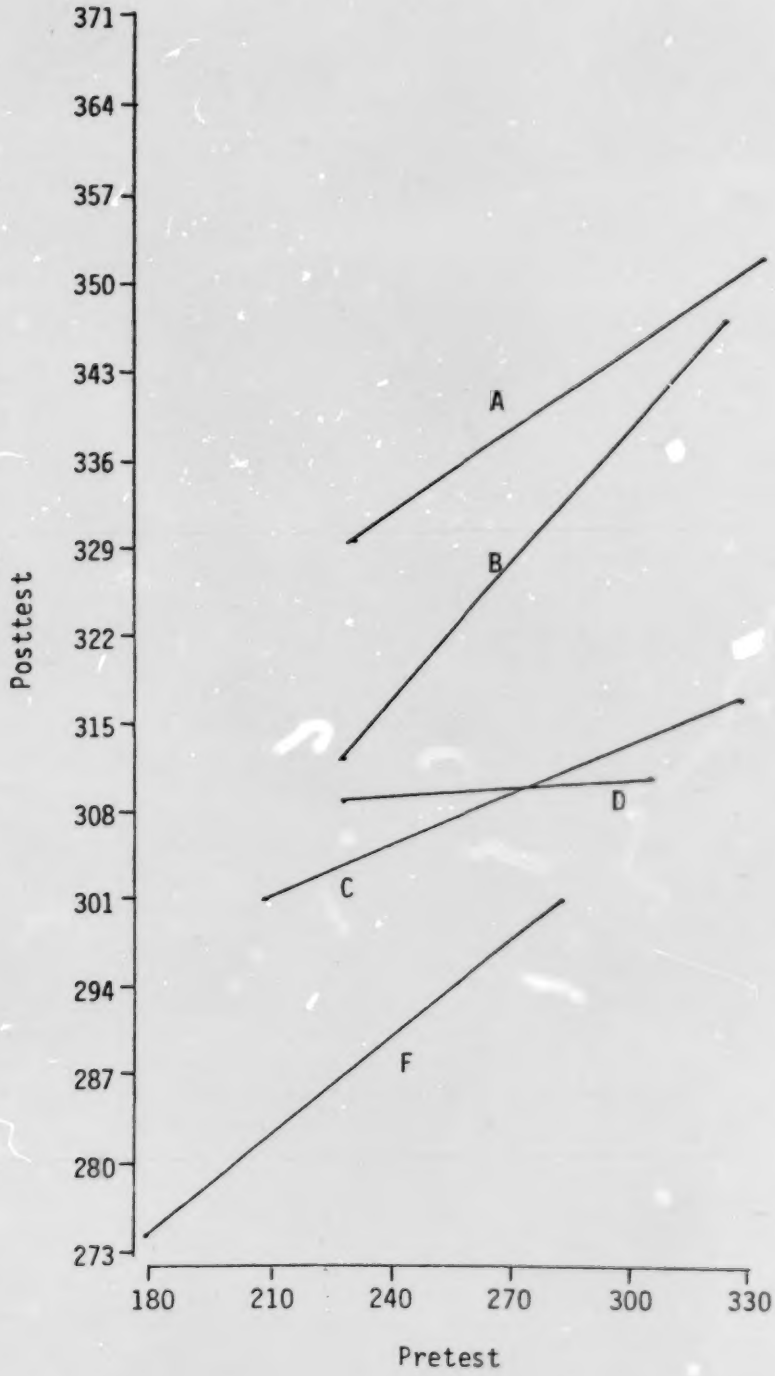


Table 5

Means and Deviations for Reading and Math Achievement by Math Grade

	Math Pre			Math Post			Reading Pre			Reading Post		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
A	65	291.73	21.38	65	340.86	20.93	65	251.09	44.44	65	337.01	32.46
B	98	272.50	20.53	97	324.62	24.30	98	211.91	41.34	97	312.16	36.56
C	63	257.25	20.33	60	306.34	24.61	63	190.84	47.91	60	286.11	36.85
D	29	256.75	20.03	28	300.42	16.50	29	175.93	58.73	28	264.89	21.96
F	23	241.52	17.15	16	286.50	23.93	23	143.34	56.65	16	253.43	40.59
Total	279	269.23	25.41	267	319.57	27.88	279	206.72	55.93	267	303.78	43.10

Figure 7

Achievement Patterns for Reading by Math Grade

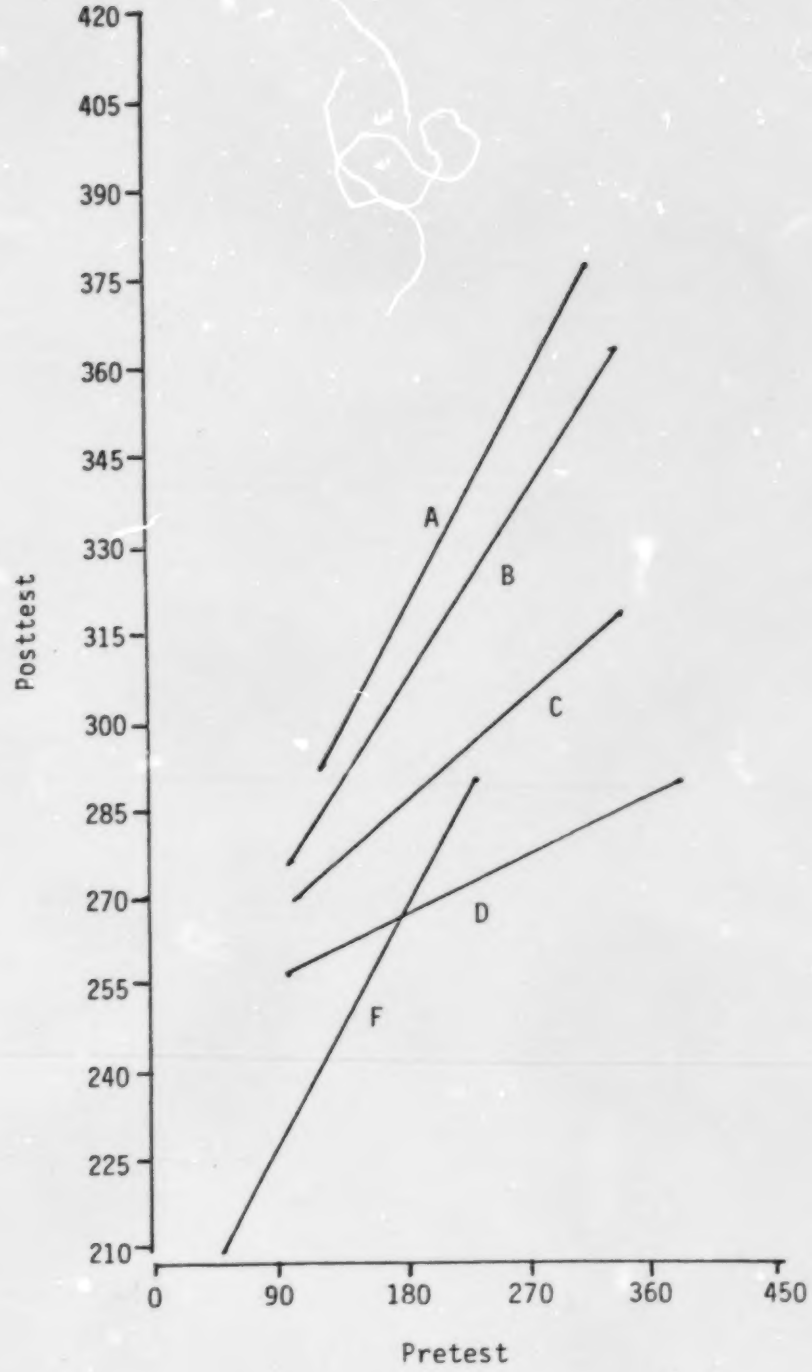


Figure 8

Achievement Patterns for Math by Math Grade

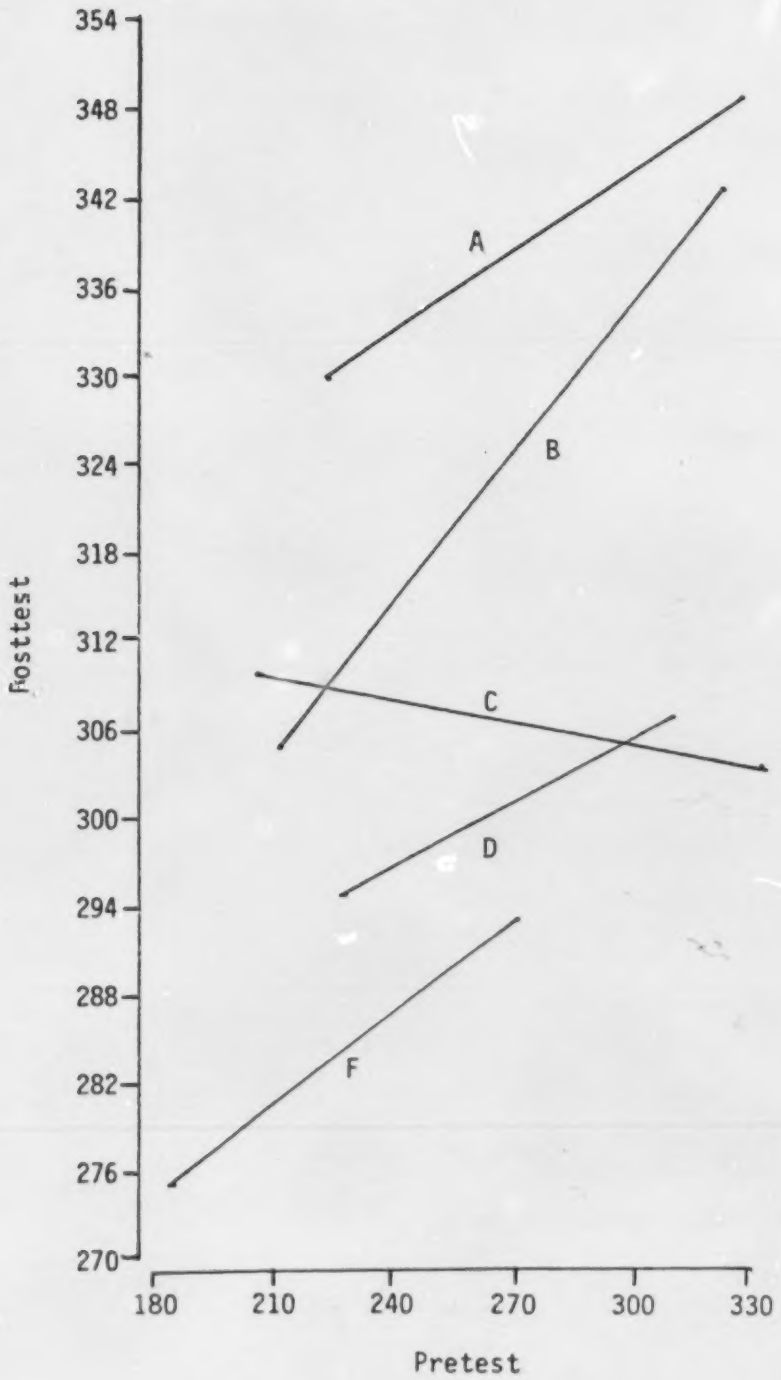


Table 6

Means and Standard Deviations for Reading and Math Achievement by Spelling Grade

	Math Pre			Math Post			Reading Pre			Reading Post		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
A	59	286.22	23.11	59	341.00	22.75	59	254.08	42.63	59	350.47	24.72
B	40	283.79	20.59	39	327.33	20.87	40	231.22	38.16	39	314.10	29.38
C	22	274.36	23.44	22	314.09	23.37	22	214.36	45.22	22	291.95	30.33
D	4	246.50	13.07	4	304.50	17.07	4	182.25	15.77	4	284.75	28.33
F	24	253.00	17.00	23	300.21	17.42	24	180.50	52.29	23	269.60	23.29
Total	279	269.23	25.41	267	319.57	27.88	279	206.72	55.93	267	303.78	43.10

The next area analyzed was for the achievement patterns in reading and math by the grades given in spelling. Table 2 reveals that significant differences in achievement patterns could be identified. The means and standard deviations for the spelling grades are given in Table 6. There were 9% of the students who had a grade of F in spelling.

The handwriting grades were analyzed next for the achievement scores in math and reading. Table 4 reveals a significant difference in the mean achievement patterns in reading with handwriting grades. Table 7 provides the means and standard deviations for the achievement score areas by handwriting grades. There is a logical progression of scores for both areas. Figure 9 provides a graphical display of the reading achievement patterns for this area. The A, B, and C grades do form distinct patterns, but the D and F patterns overlap and are confusing. There were 5% of the students who had the grade of F on handwriting.

The next factor analyzed in this study was the place in the family for the child since research has indicated some success in this area. Table 2 reveals that no significant differences were identified.

The next area analyzed in this study concerned family structure. There was a belief that children from one-parent homes would not fare as well in achievement scores as children who lived with both parents. Table 2 reveals that no significant differences were identified. Table 8 provides the means and standard deviations for the family structure groups. The children who lived with both parents had higher mean scores than the children who lived with one parent. However, these differences were not significantly different. There was some feeling that re-analyzing

Table 7

Means and Standard Deviations for Reading and Math Achievement by Handwriting Grades

	Math Pre			Math Post			Reading Pre			Reading Post		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
A	40	290.34	22.89	40	342.77	20.37	40	258.69	45.15	40	346.12	30.22
B	98	276.91	20.42	98	328.22	23.31	98	221.19	44.18	98	316.62	32.97
C	101	262.88	23.31	98	309.02	25.37	101	193.04	50.16	98	286.59	40.42
D	24	248.08	21.03	24	296.83	23.34	24	158.62	41.52	24	263.58	30.40
F	14	239.42	13.59	5	281.19	27.68	14	140.50	57.88	5	254.19	31.19
Total	279	269.23	25.41	267	319.57	27.88	279	206.72	55.93	267	303.78	43.10

Figure 9

Achievement Patterns for Reading by Handwriting Grade

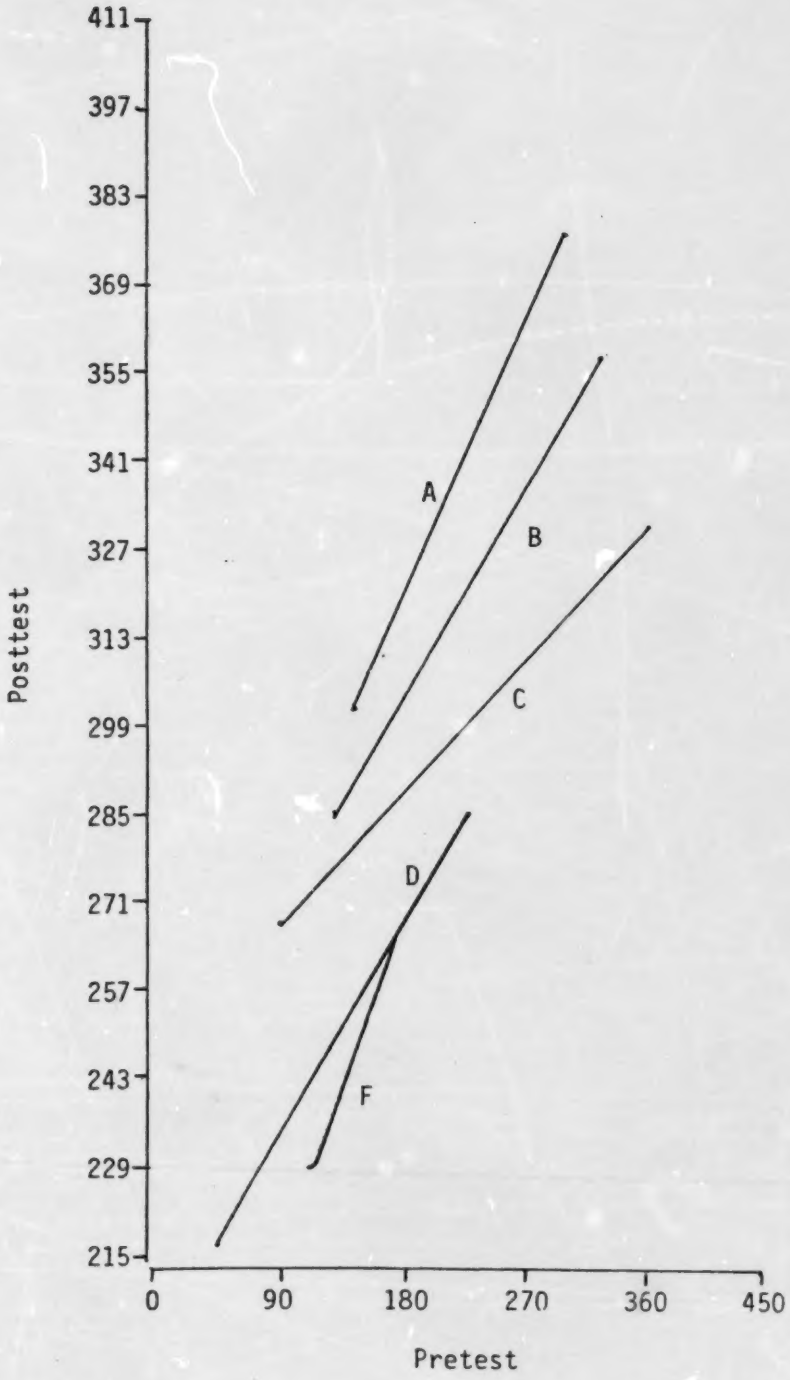


Table 8

Means and Standard Deviations for Reading and Mathematics Achievement by Family Structure

	Math Pre			Math Post			Reading Pre			Reading Post		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
One Parent	110	266.98	25.56	104	313.28	30.03	110	198.25	55.01	104	294.99	40.69
Both Parents	150	270.77	25.87	144	323.40	26.75	150	212.88	57.37	144	308.77	45.07
Other	13	265.53	19.30	13	321.61	15.81	13	194.23	41.20	13	308.61	35.14
Total	279	269.23	25.41	267	319.57	27.88	279	206.72	55.93	267	303.78	43.10

the data by race groups could reveal significant differences. However, when the analysis was conducted, no new differences were identified.

HOME EXPERIENCE VARIABLES

The literature has revealed that the home experiences have a tremendous impact on student achievement. For this reason, the teachers ascertained information from the parents on the following experiences the child had at home: Reading, Verbal, Physical, Social, Travel, Music, and Art. In addition, each parent was asked what the students liked best and least about their preschool experiences.

Table 9 provides the results of a multiple regression on reading achievement using home experience variables: The pre reading scores were used first to remove any variance which could be due to the knowledge the student had when he/she entered the first grade. As can be seen, two factors were found to make a significant impact on student achievement: reading to the child at home and providing the child with travel experiences. However, it should be noted that this regression explained only 32% of the total variance.

Table 9 reveals the mean scores for the home experience variables. It can be seen that the social experiences were the most common among the students in this study, while the travel experiences were the least common among the students.

Table 10 provides the results of the multiple regression on mathematics achievement using home experience variables. The table reveals that, after pretest scores in mathematics are removed, only experiences in reading to the children at home made a significant impact. The regression explained only 18% of the total variance.

Table 9

Multiple Regression for Post Reading Scores by Experience Variables

Variable	Beta	Standard Error	R^2 Change	F to Enter
Pre Reading Score	.35079	.07283	.23300	41.45
Reading Experience	.22253	4.01826	.07275	13.37
Travel Experience	.15247	4.22923	.01711	6.95

F Total= 43.71

DF= 3/275

R^2= .32286

Constant= 118.01

Means and Standard Deviations for Home Experience Variables Used in the Regression

Variable	Mean	Standard Deviation	n
Reading Experience	2.77	.99	279
Verbal Experience	2.66	.99	279
Physical Experience	2.91	.93	279
Social Experience	3.06	.80	279
Travel Experience	2.61	1.02	279
Music Experience	2.94	.87	279
Art Experience	2.86	.83	279

Table 10

Multiple Regression for Post Math Scores by Experience Variables

Variable	Beta	Standard Error	R^2 Change	F to Enter
Pre Math	.27481	.16703	.13757	20.81
Reading Experience	.22593	4.30801	.04181	14.06

F Total= 30.17

DF= 2/276

R^2= .17938

Constant= 56.01

There was a desire to determine if these home experience variables differed by racial groups. Table 11 indicated that there is a difference by race in terms of the home experiences the children received. Of the black students, 15.7% were rated as having no home experiences in reading, while only 4.1% of the white students had none.

Logically, the question arose concerning the effects of these experiences on student achievement by races. Table 12 provides the results by categories for reading and mathematics achievement scores. To accentuate the difference, the none and low categories were combined to be a new low category, while the high category remained the high category.

Table 12 indicates that a racial difference did exist for both reading and mathematics for the low and high categories. All four groups represented in the table made similar growth during the year. Within racial groups, there is a large difference between the low and the high category groups.

Even more revealing are the data provided by examining the reading grades the students received. Table 13 provides the data in these areas. No student, black or white, who fell in the high category, received an F in reading. Over 82% of both black and white students who fell in the highe category earned A's and B's in reading. Finally, every student who made an F in first grade reading fell in the low category (little or no reading experiences at home). Approximately 33% of both the black and white students who fell in the low category made an F in reading. The data reveal no racial bias, but a tremendous impact by the home experiences a child has had.

Table 11

Counts by Reading Experience Category by Race

	Reading Experience Categories				
	None	Low	Average	High	Total
Black	28(15.7%)	47(26.4%)	59(33.1%)	44(24.7%)	178
White	4(4.1%)	23(23.7%)	41(42.3%)	29(29.9%)	97
Total	32(11.6%)	70(25.5%)	100(36.4%)	73(26.5%)	275

Table 12

Mean Achievement Test Scores by Reading Experience Categories by Race

Category	Pre Reading	Post Reading	Difference	Pre Math	Post Math	Difference
Black Low	175.81	278.45	102.64	254.40	305.63	51.23
White Low	195.78	291.92	96.14	264.37	319.38	55.01
Black High	220.86	312.64	91.78	277.75	321.77	44.02
White High	259.10	347.10	88.00	288.03	341.55	53.52

Table 13

Count by Reading Experience Categories by Grade Received in Reading

	F	D	C	B	A	
Black Low	26(35.1%)	9(12.2%)	18(24.3%)	21(28.4%)	0(0%)	74
White Low	9(33.3%)	2(7.4%)	9(33.3%)	7(25.9%)	0(0%)	27
Black High	0(0%)	0(0%)	6(14.3%)	18(42.8%)	18(42.0%)	44
White High	0(0%)	1(3.4%)	4(13.8%)	12(41.4%)	12(41.4%)	29
	37	12	37	58	30	17

CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis of the data, the following conclusions and recommendations are made.

A. The only consistent factor related to student achievement in reading and mathematics after pretest differences were corrected was the experiences the parents provided at home in the area of reading (reading to the child). The results were the same for both black and white students, with one-third of all students receiving little or no home reading experiences failing first grade reading.

B. There are unique differences in standard achievement scores by race and sex categories. White students tended to have higher achievement test scores than black students, while females tended to have higher achievement test scores than males. These results remained stable even when pretest scores were controlled.

C. The grading patterns for reading and math have a unique relationship with achievement test scores in reading and math. The A and B grades tended to be similar with a small difference in the achievement test mean score. The C and D scores were confused and produced no unique low patterns of achievement to set them apart.

D. The review of the preschool centers by Dr. Grace revealed a high degree of agreement on most of the items listed on the observation scale. The weakest area appeared to be "Cognition, Problem-solving, and Scientific Development," while there was total agreement in the area of "Mathematics Development." The only disturbing result was the lack of opportunity in the "Verbal Development" area at one of the preschool centers. The lack of an opportunity to read to the

children daily appeared to be a major problem, especially in light of the results of this study.

Hopefully, the detailed results collected through this study will benefit first grade teachers as they plan curricula for the students who are entering the first grade from preschools studied in this report. However, major suggestions are to develop a closer relationship between the public schools and the preschool centers. The work this year alone should have made proper groundwork for such action.

In addition, there needs to be wide dissemination of the results which indicated the positive effects that reading to the child in the home has on future achievement. Black parents need to know that such home experiences make a dramatic difference. The only difference in the grades students received was the fact that 16% of the black students fell in the low category, as compared to 4% of the white students. Special workshops for parents of preschoolers on how to provide valuable home experiences could be a beneficial move. The data suggest an increase in the reading experiences in some of the black homes could make a dramatic impact on a student's success in reading.

These results will not be complete until these students are followed through several years of school. However, this initial report has verified a strong point in the literature that home experiences make a strong impact on student achievement in school. This is especially true for home experiences in reading as related to the student's reading and math achievement.

STUDENT NAME: _____ I. D. _____

SCHOOL NAME: _____

RACE: ( ) BLACK ( ) WHITE ( ) OTHER

NUMBER OF BROTHERS _____ AND SISTERS _____

PLACE OF CHILD IN FAMILY (use 1 to represent first and etc.) _____

FAMILY STRUCTURE:

( ) LIVES WITH BOTH PARENTS ( ) LIVES WITH ONE PARENT ( ) OTHER

RATE THE OVERALL QUALITY OF THE CHILD'S EXPERIENCE IN THE FOLLOWING AREAS BASED ON YOUR CONVERSATION WITH THE PARENT

	NO EXPERIENCE	LOW	AVERAGE	HIGH
1. READING EXPERIENCES (reads to the child, children books)				
2. VERBAL EXPRESSION (story telling)				
3. PHYSICAL MANIPULATION (puzzles, blocks, etc.)				
4. SOCIAL INTERACTION (cooperative play with others)				
5. TRAVEL EXPERIENCES (outside of home)				
6. MUSIC EXPERIENCES (singing, listening)				
7. ART EXPERIENCES (finger painting, drawing, coloring)				

INFORMATION ON FORMAL PRE-SCHOOL EXPERIENCES

1. DID THE CHILD HAVE A FORMAL PRE-SCHOOL EXPERIENCE? ( ) YES ( ) NO
2. IF YES, WHERE? (Name, if in Greenwood) _____
3. IF YES, HOW MANY YEARS? _____
4. WHAT DID YOUR CHILD LIKE BEST ABOUT PRE-SCHOOL? _____
5. WHAT DID YOUR CHILD LIKE THE LEAST ABOUT PRE-SCHOOL? _____

_____
TEACHER'S SIGNATURE

(Place any important comment on the back of this form)

Table A

Results of Survey of 9 Pre-Schools Using the Pre-School Activity Form

1. Language Development

The entire learning environment shall be designed to stimulate total language development. There shall be evidence that the staff understands how language develops and recognizes the hazards associated with pushing children into formal reading and writing programs.

Learning centers shall be available that provide opportunities for:

Yes	No		
8	1	a.	oral language expression and listed skills development;
5	4	b.	oral language recorded through the use of experience charts and stories;
9	0	c.	vocabulary extension through discussion and verbalization of ongoing activities;
8	1	d.	reading to children daily;
9	0	e.	informal exploration of picture books and other written materials by individuals and small groups of children;
8	1	f.	visual and listening experiences through the use of such equipment as tape recorders, record players, and projectors. Children should be given opportunities to listen to their own recorded voices and to hear others produce meaningful recordings.
9	0	g.	field trips as a part of unit learning and discussion following the trip.

Average 31 minutes a day
Range 15 to 80 minutes a day — Average length of time children spend at center per day

5 — Number of times on a weekly basis center is used

2. Physical Development

Appropriate activities related to the child's physical development shall be included daily. Children's developmental patterns are different and the need for rest and activity varies with the child. Physical abilities such as the control necessary to sit or to stand in "ordered" fashion emerge at different times and are often relatively undeveloped in the child. The

child learns health and safety habits through the adult models around him and through patient guidance.

Learning centers shall be available that provide for:

Yes	No		
9	0	a.	opportunities to hop, to skip, to jump, to stretch to balance, to climb, to throw, to catch, and to bend according to the child's individual developmental level.
8	1	b.	imaginative exploration of movement such as pretending to be a rag doll or moving like different animals;
9	0	c.	manipulation of blocks, wheel and push toys, puzzles, and other coordination-building apparatus;
7	2	d.	opportunities to prepare and taste a wide variety of food and to discuss healthful eating habits;
6	3	e.	opportunities to experience many dimensions of site and space;
9	0	f.	outdoor as well as indoor exploration;
		g.	opportunities for fine motor development such as:
9	0		tearing
9	0		cutting
9	0		pasting
9	0		finger painting
8	1		easel painting
9	0		coloring

Range from 20 to 80 per day, Average 48 minutes per day — Average length of time children spend at center per day

5 — Number of times on a weekly basis center is used

3. Social-Emotional Development

There shall be evidence that the environment, including teachers and aides, is responsive to the children; that the activities fit the child's developmental level (are not too easy or too hard); and that the child is free of undue frustration. Social-emotional growth occurs most fully when children are able to engage in activities that give them competent feelings. Activities then must be realistic in terms of the child's development.

3. Social-Emotional Development (continued)

The classroom environment and the learning activities shall:

Yes	No		
8	1	a.	fit the child's developmental level;
8	1	b.	indicate to the child that his abilities are acceptable;
9	0	c.	reflect an attitude of respect and warmth toward each child;
9	0	d.	provide for block-building, manipulatives, social living areas, and group participation so that children can work together and learn to share and cooperate with each other more effectively (adult standards of "cooperation" often are inappropriate and unrealistic for children);
9	0	e.	help each child recognize the needs of others;
9	0	f.	assist each child to trust the environment and the adults within that environment;
7	2	g.	promote independence;
9	0	h.	promote completion of task;
9	0	i.	create an opportunity for the child to gain self-worth;
9	0	j.	provide an opportunity for successful completion of a task (refer to a);
8	1		Are these opportunities present at all learning centers? If not, list where they are:

4. Cognition, Problem-Solving, and Scientific Devleopment

There shall be opportunities daily for children to seek solutions to problems and situations that are real to them. If the child is "to know" rather "to know about," problem-solving and scientific development must be a part of his life and must be on his "scale." Adult functioning levels are simply not possible for children, and they cannot be expected to think as adults think. Children below the age of six are perceptually bound in their cognitive development. They can come to know and believe only what they see and expereince. When we understand the "child's" type of reasoning, we can see that his views are acceptable insofar as he has come to view the world. He cannot interpret as the adult who has more experience.

Learning centers shall be available that provide:

4. Cognition, Problem-Solving, and Scientific Development (continued)

Yes	No		
8	1	a.	opportunities for the child to compare and contrast, to see similarities and differences;
9	0	b.	opportunities for the child to manipulate objects;
9	0	c.	opportunities for the child to see;
9	0	c.[1]	opportunities for the child to see and express his perceptions of what he sees;
9	0	d.	opportunities for the child to hear;
8	1	d.[1]	opportunities for the child to hear and express his perceptions of what he hears;
7	2	e.	opportunities for the child to taste, smell, and touch;
7	2	e.[1]	organized opportunities;
5	4	e.[2]	discovery type activities;
8	1	f.	opportunities for the child to take apart, act on, and use diverse materials such as water, sand, earth, clay, puzzles, natural objects, mechanical objects, etc.;
4	5	g.	opportunities for the child to observe a variety of natural phenomena and to care for and observe plants and animals;
7	2	h.	opportunities for the child to verbalize his thinking processes as he is involved in a task;
8	1	i.	opportunities for verbal discussion and recognition of alphabet (out of sequence);
8	1	j.	begin initial consonant sound teaching through activities;

Range 10 to 60 minutes per day, Average length of time children spend at center per day
Average 41 minutes per day

5 Number of times on a weekly basis center is used

5. Mathematical Development

Provisions shall be made to include mathematical activities that fit the child's level of development. Mathematics is the organization of experiences of time, space, and quantity into a systematic form. The child

5. Mathematical Development (continued)

should become aware of his relationship to his environment and should be helped to organize and symbolize this experience. Activities introducing these concepts should be both planned and incidental; must involve the use of concrete materials and move toward abstraction, and must include problem-solving as it relates to the experience of the child.

Learning centers shall be available that provide opportunities for:

Yes	No		
9	0	a.	exploration and manipulation of concrete objects;
9	0	b.	counting activities in solving problems of interest to the child;
9	0	c.	beginning recognition of numerals through various materials including puzzles, games, recipes, books, pictures, manipulative cut-outs, etc.;
9	0	d.	development of number concepts through experiences with quantity such as weighing and measuring, pouring liquids, stacking and building with blocks, and manipulating clay and other plastic materials;
9	0	e.	awareness of time intervals and spatial relationships beginning with the child's own sense of the time and space close to himself, such as: planning a day, marking the calendar, recognizing special days and holidays, exploring the space around himself, talking about over, under, up, down, far, and near, and mapping the classroom;
9	0	f.	opportunities for the child to manipulate and verbally discuss basic shapes, recognition of square, circle, triangle, rectangle.

Range 15 to 60
minutes per day Average length of time children spend at center per day
Average 31 minutes per day
5 Number of times on a weekly basis center is used

6. Creative Development

Activities shall be provided that stimulate and enhance creative and imaginative development for each child in the program. Originality should be encouraged throughout the day. Creativity is the development of the ability to solve problems in a flexible and original way. In order to achieve this kind of thinking, the child's natural curiosity should be encouraged and his imagination stimulated. He should be allowed a choice of media through which to express his feelings. The process of exploring

6. Creative Development (continued)

should be presented as an exciting one. Mistakes should be accepted and encouraged as a natural part of the exploration, and the child should be respected for his interest and his attempt as well as for his product.

Learning centers shall be available that provide opportunities for:

Yes	No		
9	0	a.	observation of the environment;
8	1	b.	manipulative creative opportunities using a variety of media in an unrestricted setting;
9	0	b.[1]	manipulative creative opportunity using a variety of media in a restricted setting such as unity designation of "a house", "my mother";
9	0	c.	development of the ability to distinguish between fantasy and reality;
3	6	d.	appreciation of the artistic and the beautiful through the use of clasical works of art;
9	0	d.[1]	appreciation of the artistic and the beautiful in our environment;
9	0	e.	encouragement of imagination through play, verbalization, and artistic creation;
9	0	f.	exploration of movement with and without music;
9	0	g.	enjoyment of music through singing songs, listening, and musical games;
8	1	h.	exploration of creative dramatics though story-telling, role-playing, puppetry, and doll-playing;
6	3	i.	dictation of experience stories and recording of verbal experiences;

Range from 6 to 75
minutes per day Average length of time children spend at center per day
Average 40 minutes per day

5 Number of times on a weekly basis center is used

7. Does the pre-school have the following centers of interest:

7. Centers (continued)

Yes	No		
9	0	a.	Blocks
9	0	b.	Housekeeping
9	0	c.	Library
9	0	d.	Art
9	0	e.	Music
6	3	f.	Science/Social Studies
9	0	g.	Manipulative Toys
2	9	h.	Places for privacy
9	0	i.	Outdoor play area

8.

Yes	No	
9	0	The physical facilities are clean, attractive, and designed for children.

9.

Yes	No	
6	3	The teachers are certified in early childhood education.

10. What is the teacher/student ratio?

Average ratio is 14.3 to 1; Actual ratio ranges from 19 to 1 to 11 to 1.

11. What is the adult/student ratio?

Average ratio is 12.4 to 1

12.

Yes	No	
6	3	Structured program philosophy "academically oriented"
5	4	Discovery learning - open education philosophy - "Total child development theory"